U.S. Rights — Sole or Joint

RECORDED PATENT & TRADEMARK OFFICE

Assignment

JUL 12 91 For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto

name and address of assignee

NEC Corporation 7-1, Shiba 5-chome, Minato-ku,

Tokyo, Japan

(hereinafter ASSIGNEE) all right, title and interest for the United States, its territories and possessions in and to his invention relating to

title of invention

"FAST CALCULATION APPARATUS FOR CARRYING OUT

A FORWARD AND AN INVERSE TRANSFORM" as set forth in his United States Patent Application

are executed concurrently herewith

check one

executed on _ No. 07/712,888 filed June 12, 1991 Serial

in and to said United States Patent Application including any and all divisions or continuations thereof and in and to any and all Letters Patent of the United States which may issue on any such application or for said invention, including any and all reissues or extensions thereof, to be held and enjoyed by said ASSIGNEE, its successors, legal representatives and assigns to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made;

Each of the undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all such Letters Patent to said ASSIGNEE, its successors or assigns in accordance herewith;

Each of the undersigned warrants and covenants that he has the full and unencumbered right to sell and assign the interests herein sold and assigned and that he has not executed and will not execute any document or instrument in conflict herewith;

Each of the undersigned further covenants and agrees that at any time upon request of said ASSIGNEE, its successors, legal representatives or assigns he will communicate to said ASSIGNEE, its successors, legal representatives or assigns all information known to him relating to said invention or patent application and that he will execute and deliver any papers, make all rightful oaths, testify in any legal proceedings and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, legal representatives or assigns to perfect title to said invention, to said application including divisions and continuations thereof and to any and all Letters Patent which may be granted therefor or thereon, including reissues or extensions, in said ASSIGNEE, its successors, or assigns or to assist said ASSIGNEE, its successors, legal representatives or assigns in obtaining, reissuing or enforcing Letters Patent of the United States for said invention;

Each of the undersigned hereby grants the firm of FOLEY & LARDNER, SCHWARTZ, JEFFERY, SCHWAAB, MACK, BLUMENTHAL & EVANS the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment. median Hornton 300 06/28/91

names and signatures of inventors

Name: MASAHIRO IWADARE		Name:	date
Name:	date	Name:	date
Name:	date	Name:	date

names and signatures of witnesses

Comoroshi Wakai date 06/28/91 06/28/91

Note: Prima facie evidence of execution may optionally be obtained by execution of this document before a U.S. Consul or before a local officer authorized to administer oaths whose authority is proved by a certificate from a U.S. Consul.